

ROSEMOUNT SPECIFICATIONS

Model 8705 and Model 8707 High-Signal Magnetic Flowmeter Flowtubes

1. EQUIPMENT DESCRIPTION

- **Model 8705:** A dc powered, flanged magnetic flowmeter flowtube capable of monitoring liquids with conductivity of 5 microsiemens/cm (5 micromhos/cm) or greater.
- **Model 8707 High-Signal:** A dc powered, flanged magnetic flowmeter flowtube capable of monitoring liquids with conductivity of 50 microsiemens/cm (50 micromhos/cm) or greater. Operated in conjunction with the 8712H High-Signal Magnetic Flowmeter Transmitter to give superior output stability in applications with high levels of process noise.

2. REFERENCES

- Material supplied under this specification is in conformance with:
 - National Electrical Manufacturer's Association (NEMA) standard number ICS6, "Enclosure for industrial controls and systems," 4X.
 - Factory Mutual (FM), Canadian Standards Association (CSA), and KEMA/CENELEC standards.
- Manufacturer must be certified as meeting the requirements of ISO 9001.

3. ENVIRONMENTAL CONDITIONS

- The instrument selected is suitable for the following conditions:
 - Humidity: 0 to 100 percent (Model 8707: 95 percent) relative humidity up to 120 °F (49 °C) under non-condensing conditions.
 - Vibration Effect; negligible effect in accordance with SAMA PMC 31.1-1980.
Remote mount flowtube to Condition 3 and transmitter to Condition 2 per paragraph 5.3.

4. PROCESS CONDITIONS

- The flowtube is capable of operating at the following process conditions as a minimum:
- Temperature
 - PTFE Teflon Lining -20 to 350 °F (-29 to 177 °C)
 - ETFE Tefzel Lining -20 to 300 °F (-29 to 149 °C)
 - Polyurethane Lining 0 to 140 °F (-18 to 60 °C)
 - Neoprene Lining 0 to 185 °F (-18 to 85 °C)
 - Natural Rubber Lining 0 to 185 °F (-18 to 85 °C)
- Conductivity
 - Process liquid must have a conductivity of 5 microsiemens/cm (5 micromhos/cm) [Model 8707: 50 microsiemens/cm (50 micromhos/cm)] or greater. This excludes the effect of interconnecting cable length in remote transmitter installations.
- Pressure
 - All liners (@100 °F) ANSI Class 150# Carbon Steel Flange Rating, 285 psi; ANSI Class 150# Stainless Steel Flange Rating, 275 psi; ANSI Class 300# Carbon Steel Flange Rating, 740 psi.
 - All liners (@ 37.8 °C) DIN PN 10-40 Flange Rating (15-80 mm line sizes), 29.5 bars; DIN PN 10 Flange Rating (100-900 mm line sizes), 7.3 bars; DIN PN 16 Flange Rating (100-900 mm line sizes), 11.3 bars; DIN PN 40 Flange Rating (100-900 mm line sizes), 29.5 bars.
- Vacuum
 - PTFE (Teflon) Liner: Full vacuum to 350 °F (177 °C) through 4-inch line sizes. Consult factory for vacuum applications with 6-inch line sizes or larger.
 - ETFE (Tefzel) Liner: Full vacuum to maximum material temperature limits for all available line sizes.
 - Polyurethane Lining: Full vacuum to maximum material temperature limits for all available line sizes.
 - Neoprene Lining: Full vacuum to maximum material temperature limits for all available line sizes.
 - Natural Rubber: Full vacuum to maximum material temperature limits for all available line sizes.
- Submersibility
 - Continuously submersible to 30 feet (IP 68).
- Mounting Position Effect
 - None when installation ensures flowtube remains full.

5. ELECTRICAL

- Flowtube shall be certified for use in hazardous areas by a recognized authority, such as Factory Mutual.
- Electrical connections shall be ¾-14 NPT conduit threads.

6. POWER SUPPLY

- Power is supplied to the flowtube by the transmitter only. Integral mount transmitters will be factory wired.

7. LINE SIZES

- **Model 8705:** Flowtubes is available in the following line sizes:
 - Teflon: 0.5 through 36 inches.
 - Tefzel: 0.5 through 16 inches.
 - Polyurethane: 1.5 through 36 inches.
 - Neoprene: 1.5 through 36 inches.
 - Natural Rubber: 1.5 through 36 inches.
- **Model 8705:** Flange styles are:
 - 0.5 through 24 inches ANSI Class 150 or ANSI 300 RF.
 - 30 and 36 inches AWWA Class 125 RF.
 - 0.5 through 36 inches DIN PN 10, 16, 25 or 40.
- **Model 8707 High-Signal:** Flowtubes are available in line sizes 3 through 36 inches.
- **Model 8707 High-Signal:** Flange styles are:
 - 3 through 24 inches, ANSI Class 150 or ANSI 300 RF.
 - 30 and 36 inches, AWWA Class 125 RF.
 - 3 through 36 inches, DIN PN 16, 25

8. OPTIONS

- The following options are available on Model 8705 Flowtubes:
 - Lining Protectors (available with PTFE liner only).
 - Grounding Rings.
 - Grounding Electrode.
 - Field-Replaceable Electrodes (1.5 through 36 inches only).
 - Sanitary 3A for ANSI Class 150 to Tri-Clamp (0.5 through 3 inches only).
- The following options shall be available on Model 8707 High-Signal Flowtubes:
 - Lining Protectors (available with PTFE liner only).
 - Grounding Rings.

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